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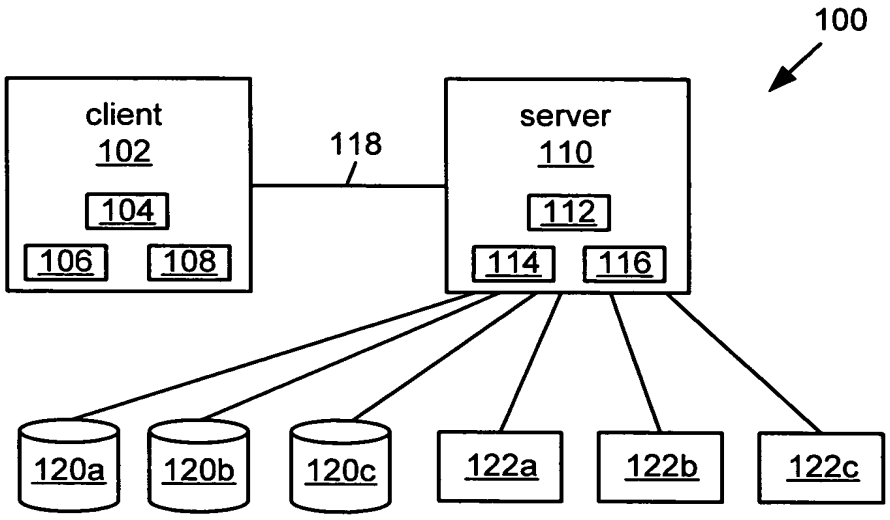
100
client
102
104
106
108
118
server
110
112
114
116
120a
120b
120c
122a
122b
122c

FIG. 1

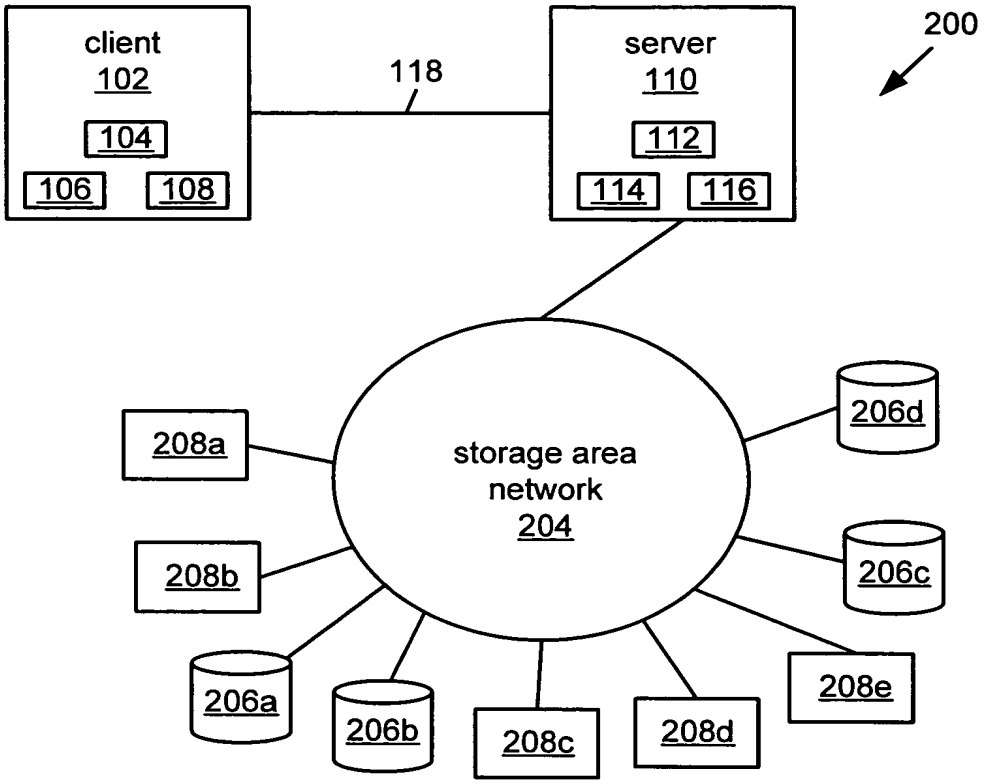
client
102
104
106
108
118
server
110
112
114
116
200
storage area
network
204
208a
208b
206a
206b
208c
208d
208e
206c
206d

FIG. 2

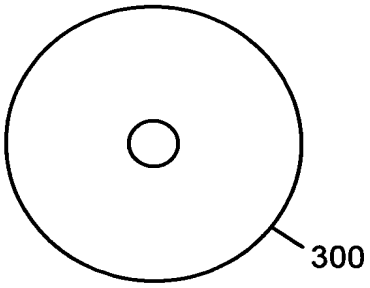
300

FIG. 3

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FIG. 4A

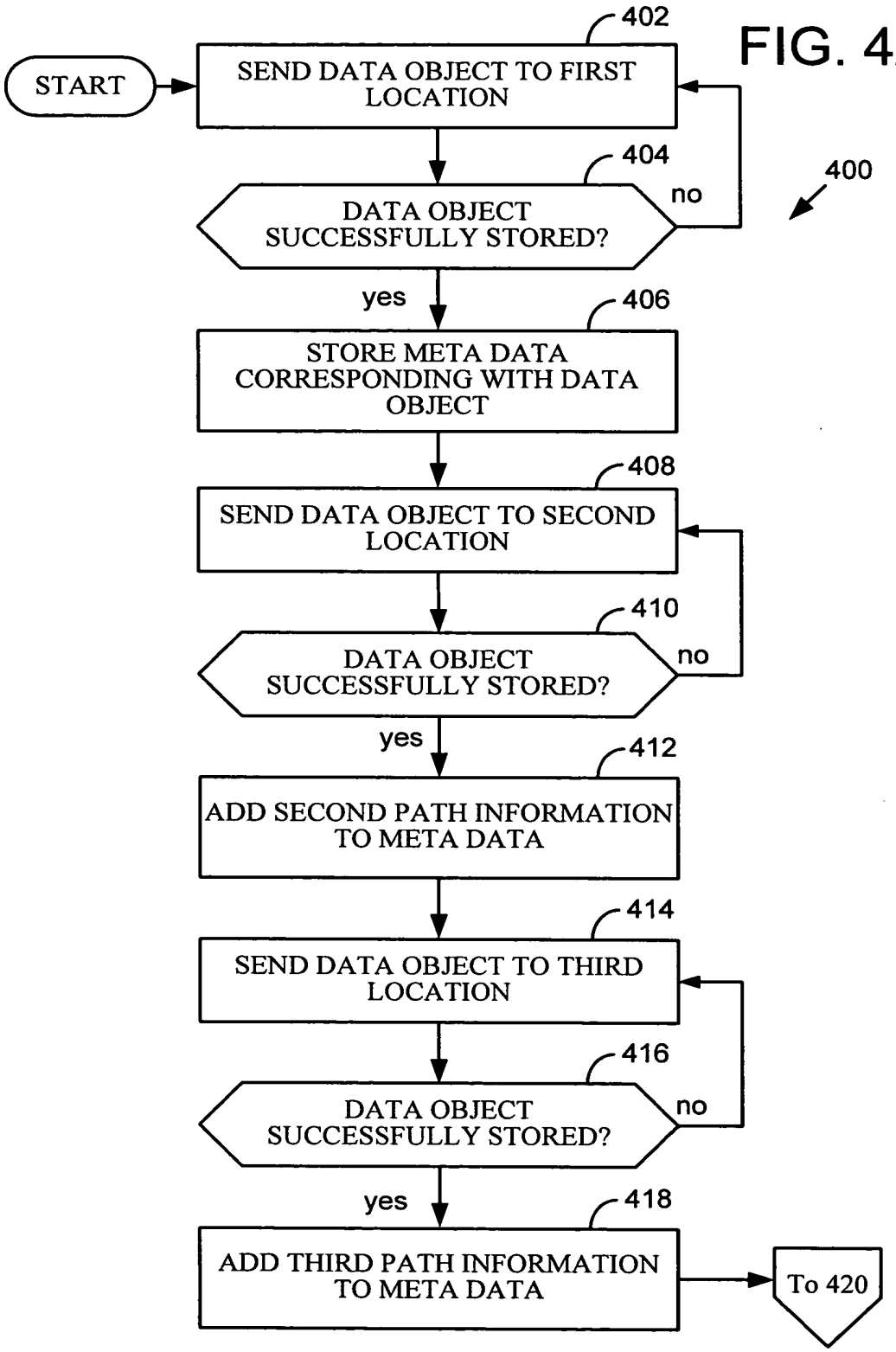
START
SEND DATA OBJECT TO FIRST LOCATION
402
DATA OBJECT SUCCESSFULLY STORED?
404
no
yes
400
STORE META DATA CORRESPONDING WITH DATA OBJECT
406
SEND DATA OBJECT TO SECOND LOCATION
408
DATA OBJECT SUCCESSFULLY STORED?
410
no
yes
ADD SECOND PATH INFORMATION TO META DATA
412
SEND DATA OBJECT TO THIRD LOCATION
414
DATA OBJECT SUCCESSFULLY STORED?
416
no
yes
ADD THIRD PATH INFORMATION TO META DATA
418
To 420

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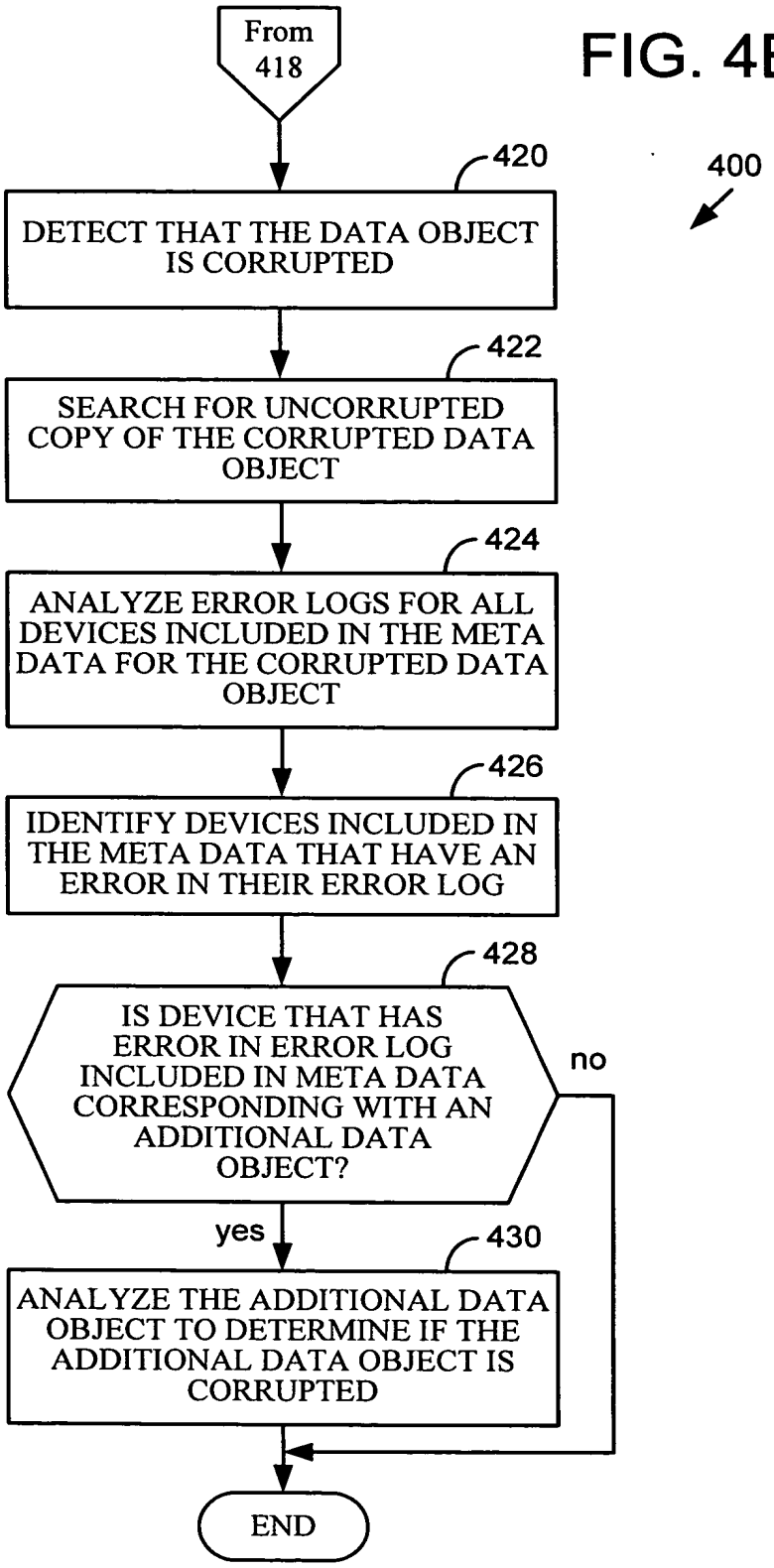
FIG. 4B


From 418
400
420
DETECT THAT THE DATA OBJECT IS CORRUPTED
422
SEARCH FOR UNCORRUPTED COPY OF THE CORRUPTED DATA OBJECT
424
ANALYZE ERROR LOGS FOR ALL DEVICES INCLUDED IN THE META DATA FOR THE CORRUPTED DATA OBJECT
426
IDENTIFY DEVICES INCLUDED IN THE META DATA THAT HAVE AN ERROR IN THEIR ERROR LOG
428
IS DEVICE THAT HAS ERROR IN ERROR LOG INCLUDED IN META DATA CORRESPONDING WITH AN ADDITIONAL DATA OBJECT?
no
yes
430
ANALYZE THE ADDITIONAL DATA OBJECT TO DETERMINE IF THE ADDITIONAL DATA OBJECT IS CORRUPTED
END